

CLAIM LISTING

Claims 1-63 (Cancelled)

64. (New) A medical device comprising
- a substrate constructed and arranged for insertion into a patient and having at least one lumen, said lumen having a surface,
- wherein the substrate comprises polymers or copolymers of polyurethane or silicon; and
- a plurality of monomer molecules directly graft polymerized on a surface of the substrate, forming a coating thereon, wherein said coating on said substrate is a polymer or copolymer or a derivative of said polymer or copolymer formed from a monomer or derivative thereof selected from the group consisting of an acrylamide, N,N-dimethylacrylamide, and mixtures thereof.
65. (New) The medical device of Claim 64, wherein the substrate is a catheter, guide wire or medical instrument.
66. (New) The medical device of Claim 64, wherein the catheter is selected from the group consisting of PTCA catheters, cardiology catheters, central venous catheters, urinary catheters, drain catheters, and dialysis catheters.
67. (New) The medical device of Claim 64, which further includes a third polymeric layer.

68. (New) The medical device of Claim 64, wherein the coating provides a property of absorbing large quantities of water to provide moisture absorption or of lubricity.
69. (New) The medical device of Claim 64, wherein the coating provides functional groups to attach physiologically or pharmacologically active agents; permitting the delivery of drugs from the coating.
70. (New) The medical device of Claim 64, wherein the coating provides a drug depot permitting the delivery of drugs from the coating.
71. (New) The medical device of Claim 64, wherein the substrate is a silicon polymer.
72. (New) The medical device of Claim 64, wherein the substrate is polyurethane.
73. (New) The medical device of claim 64, wherein the entire surface of the interior luminal surface, the exterior surface or both, is coated.
74. (New) The medical device of Claim 64, which consists essentially of said substrate and said coating.
75. (New) The medical device of Claim 64, which consists of said substrate and said coating.

76. (New) A medical device comprising
a substrate constructed and arranged for insertion into a patient and having at least one lumen, said lumen having a surface,
wherein the substrate comprises polymers or copolymers selected from the group consisting of polyurethanes, silicones, polyolefins, polyamides and latex; and
a plurality of monomer molecules directly graft polymerized on the surface of the substrate, forming a coating thereon, wherein said coating on said substrate is a polymer or copolymer or a derivative of said polymer or copolymer formed from a monomer or derivative thereof selected from the group consisting of an acrylamide, N,N-dimethylacrylamide, polyethyleneglycolacrylate, alkylacrylate, pyridine, piperidine, maleic acid, hydroxyethyl methacrylate, and admixtures thereof.
77. (New) The medical device of Claim 76, wherein the substrate is a catheter, guide wire or medical instrument.
78. (New) The medical device of Claim 77, wherein the catheter is selected from the group consisting of PTCA catheters, cardiology catheters, central venous catheters, urinary catheters, drain catheters, and dialysis catheters.
79. (New) The medical device of Claim 76, which further includes a polymeric layer on the coating.

80. (New) The medical device of Claim 76, wherein the coating provides a property of absorbing large quantities of water to provide moisture absorption or of lubricity.
81. (New) The medical device of Claim 76, wherein the coating provides functional groups to attach physiologically or pharmacologically active agents.
82. (New) The medical device of Claim 76, wherein the coating provides a drug depot permitting the delivery of drugs from the coating.
83. (New) The medical device of claim 76, wherein the monomer or derivative thereof is selected from the group consisting of an acrylamide, N,N-dimethylacrylamide, polyethyleneglycolacrylate, alkylacrylate, and hydroxyethyl methacrylate.
84. (New) The medical device of claim 76, wherein the entire surface of the interior luminal surface, the exterior surface or both, is coated.
85. (New) The medical device of Claim 76, which consists essentially of said substrate and said coating.
86. (New) The medical device of Claim 76, which consists of said substrate and said coating.

87. (New) A medical device comprising
a substrate constructed and arranged for insertion into a patient and having at least one lumen, said lumen having a surface,
wherein the substrate comprises polymers or copolymers selected from the group consisting of polyurethanes, silicon polymers, polyolefins, polyamides, polyvinylchloride and latex; and
a plurality of monomer molecules directly graft polymerized on the surface of the substrate, forming a coating thereon, wherein said coating on said substrate is a polymer or copolymer or a derivative of said polymer or copolymer formed from a monomer or derivative thereof selected from the group consisting of an acrylamide, N,N-dimethylacrylamide, polyethyleneglycolacrylate, alkylacrylate, hydroxyethyl methacrylate, and admixtures thereof.
88. (New) The medical device of Claim 87, wherein the substrate is a catheter, guide wire or medical instrument.
89. (New) The medical device of Claim 87, wherein the catheter is selected from the group consisting of PTCA catheters, cardiology catheters, central venous catheters, urinary catheters, drain catheters, and dialysis catheters.
90. (New) The medical device of Claim 87, which further includes a polymeric layer on the coating.

91. (New) The medical device of Claim 90, wherein the polymeric layer comprises a polymer selected from the group consisting of polyurethanes, acrylics, polyamides and cellulotics.
92. (New) The medical device of Claim 87, wherein the coating provides a property of absorbing large quantities of water to provide moisture absorption or of lubricity.
93. (New) The medical device of Claim 87, which further includes physiologically or pharmacologically active agents and wherein the coating provides functional groups to attach physiologically or pharmacologically active agents.
94. (New) The medical device of claim 87, wherein the lumen has both interior and exterior surfaces, and at least a portion of both the interior and exterior of the lumen is coated with monomer molecules graft polymerized to said surfaces.
95. (New) The medical device of claim 87, wherein the entire surface of the interior luminal surface, the exterior surface or both, is coated.
96. (New) The medical device of Claim 87 which consists essentially of said substrate and said coating.
97. (New) The medical device of Claim 87, which consists of said substrate and said coating.